

Claims

- [1] 1. A purified extract isolated from Cucurbitaceae family plant prepared by the steps consisting of: adding about 5 to 15 fold volume of distilled water to dried material of Cucurbitaceae family plant, extracting the plant to obtain plant extract, filtrating and drying the extract with reduced pressure to obtain hot water-soluble extract of the plant at 1st step; suspending said hot water-soluble extract with water and subjecting fractionation with hexane, chloroform, ethylacetate, butanol solvent with increasing order of polarity to obtain respective organic solvent-soluble fraction at 2nd step; subjecting said chloroform-soluble fraction to silica gel column chromatography with a solvent mixture mixed with hexane: chloroform: methanol (16:15:1) to afford 11 sub-fractions at 3rd step; subjecting 9th fraction among said sub-fractions to repetitive silica gel column chromatography with a solvent mixture mixed with chloroform: methanol and HPLC to obtain inventive purified extract designated to 'cmc-9' having potent anti-obesity and anti-adipogenic activity and showing TLC spectrum as shown in Fig. 12.
- [2] 2. A pharmaceutical composition comprising the extract of Cucurbitaceae family plant or the purified extract as set forth in claim 1 having anti-adipogenic and anti-obesity activity as an active ingredient in an effective amount to treat and prevent obesity and adipogenesis-involved diseases.
- [3] 3. The composition according to claim 2, wherein said Cucurbitaceae family plant is selected from pumpkin (*Cucurbita moschata* DUCH), water-melon (*Citrullus vulgaris* SCHRAD), sponge gourd (*Luffa cylindrical* L. ROEM), gourd (*Lagenaria siceraria* STANDL. var. *depressa* HERA), and cucumber (*Cucumis sativus* L).
- [4] 4. The composition according to claim 3, wherein said Cucurbitaceae family plant is selected from pumpkin (*Cucurbita moschata* DUCH), water melon (*Citrullus vulgaris* SCHRAD), and sponge gourd (*Luffa cylindrical* L. ROEM).
- [5] 5. The composition according to claim 2, wherein said extract of Cucurbitaceae family plant is extracted from the stem or leaf thereof.
- [6] 6. The composition according to claim 2, wherein said obesity and adipogenesis-involved diseases comprises obesity, type II diabetes, steatosis,

hyperlipemia, cardiovascular disease, arteriosclerosis and the like.

- [7] 7. The composition according to claim 2, wherein said extract is crude extract or non-polar solvent soluble extract.
- [8] 8. The composition according to claim 7, wherein said crude extract is hot-water soluble extract.
- [9] 9. The composition according to claim 7, wherein said non-polar solvent is selected from hexane, chloroform, dichloromethane, and ethylacetate.
- [10] 10. The composition according to claim 9, wherein said non-polar solvent is chloroform.
- [11] 11. The composition according to any one among claims 2 to 10, wherein composition contains about 0.02 ~ 90 % by weight of the above extract based on the total weight of the composition.
- [12] 12. A health care food comprising a crude extract, non-polar solvent soluble extract of Cucurbitaceae family plant or cmc-9 extract as set forth in claim 1, together with a sitologically acceptable additive for the prevention and alleviation of obesity and adipogenesis-involved diseases.
- [13] 13. The health care food according to claim 12, wherein said food is health care beverage.